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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Air Force									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0207136F: Manned Destructive Suppression							
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	5.413	9.748	12.937	0.000	12.937	13.374	13.940	14.565	15.239	Continuing	Continuing
674595: F-16 HARM Targeting System	5.413	9.748	12.937	0.000	12.937	13.374	13.940	14.565	15.239	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

The Manned Destructive Suppression (MDS) program funds the development, procurement, and sustainment of the Air Force's Suppression of Enemy Air Defenses (SEAD) and Destruction of Enemy Air Defenses (DEAD) capabilities. The F-16 HARM Targeting System (HTS) is currently the only programmed reactive SEAD capability and enables targeting the HARM missile in its most lethal 'range known' mode. The program provides F-16 Block 50/52 aircraft with the ability to employ the AN/ASQ-213 Pod. With the introduction of HTS Revision 7 (HTS R7), the AN/ASQ-213 Pod now has a precision geolocation capability to target Precision Guided Munitions (PGMs) to destroy fixed and mobile enemy air defense elements, and enables the F-16 to carry both an AN/ASQ-213 HTS R7 Pod and an Advanced Targeting Pod (ATP), by relocating HTS R7 pod to the aircraft's left inlet hard point. HTS R7 completed System Development and Demonstration (SDD) in FY07 following operational testing certification and fielding on the first F-16 Block 50/52 squadron in May 07. These improvements represent the Air Force's near-term solution for reactive time critical targeting for DEAD until this mission can be transferred to F-35 or a yet to be defined system. HTS R7 precision targeting coordinates can be provided to all Joint Forces via Link-16. This RDT&E effort continues preplanned product improvements (P3I) and applies technologies similar to those demonstrated in the Advanced Tactical Targeting Technologies (AT3) program and HTS R7 development. This PE is in Budget Activity 7 - Operational System Development because it supports preplanned product improvements and upgrade development of F-16 HTS (R7), a fielded system, to the HTS R7 SWUP configuration.

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APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development		R-1 ITEM NOMENCLATURE PE 0207136F: Manned Destructive Suppression			
B. Program Change Summary (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	5.570	10.748	0.000	0.000	0.000
Current President's Budget	5.413	9.748	12.937	0.000	12.937
Total Adjustments	-0.157	-1.000	12.937	0.000	12.937
• Congressional General Reductions		-1.000			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	-0.157	0.000	12.937	0.000	12.937
Change Summary Explanation					
The FY 2010 President's Budget submittal did not reflect FY 2011 through FY 2015 funding. Therefore, explanation of changes between the two budget positions cannot be made in a relevant manner.					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Air Force								<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0207136F: <i>Manned Destructive Suppression</i>				<b>PROJECT</b> 674595: <i>F-16 HARM Targeting System</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
674595: <i>F-16 HARM Targeting System</i>	5.413	9.748	12.937	0.000	12.937	13.374	13.940	14.565	15.239	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

**A. Mission Description and Budget Item Justification**

The Manned Destructive Suppression (MDS) program funds the development, procurement, and sustainment of the Air Force's Suppression of Enemy Air Defenses (SEAD) and Destruction of Enemy Air Defenses (DEAD) capabilities. The F-16 HARM Targeting System (HTS) is currently the only programmed reactive SEAD capability and enables targeting the HARM missile in its most lethal 'range known' mode. The program provides F-16 Block 50/52 aircraft with the ability to employ the AN/ASQ-213 Pod. With the introduction of HTS Revision 7 (HTS R7), the AN/ASQ-213 Pod now has a precision geolocation capability to target Precision Guided Munitions (PGMs) to destroy fixed and mobile enemy air defense elements, and enables the F-16 to carry both an AN/ASQ-213 HTS R7 Pod and an Advanced Targeting Pod (ATP), by relocating HTS R7 pod to the aircraft's left inlet hard point. HTS R7 completed System Development and Demonstration (SDD) in FY07 following operational testing certification and fielding on the first F-16 Block 50/52 squadron in May 07. These improvements represent the Air Force's near-term solution for reactive time critical targeting for DEAD until this mission can be transferred to F-35 or a yet to be defined system. HTS R7 precision targeting coordinates can be provided to all Joint Forces via Link-16. This RDT&E effort continues preplanned product improvements (P3I) and applies technologies similar to those demonstrated in the Advanced Tactical Targeting Technologies (AT3) program and HTS R7 development. This PE is in Budget Activity 7 - Operational System Development because it supports preplanned product improvements and upgrade development of F-16 HTS (R7), a fielded system, to the HTS R7 SWUP configuration.

**B. Accomplishments/Planned Program (\$ in Millions)**

	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
MAJOR THRUST: P3I R7 SWUP <i>FY 2009 Accomplishments:</i> In FY 2009: HTS R7 software upgrade (SWUP) development began to address known deficiencies and capability upgrades to system performance. Following the completion of system requirements	5.413	7.953	10.264	0.000	10.264

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
functionality, both preliminary and critical software design milestones were accomplished. This major thrust also includes continued mission support, i.e., program management, activities.						
FY 2010 Plans: In FY 2010: HTS R7 SWUP flight testing begins and study efforts on capability upgrades continue. SWUP initial software build continues which would complete in time for release to flight testing this year. A series of flight test planning activities to include scheduling of needed resources continue through this year leading up to the beginning of initial flight testing with associated data analysis of recorded test data to capture required baseline data. Also, this effort would include release of updated and tested software for subsequent flight test missions. As a precursor to the next follow-on upgrade effort, studies will continue to define candidates and mitigate risks to ensure a successful, sustainable HTS P3I program. This major thrust also includes continued mission support, i.e., program management, activities.						
FY 2011 Base Plans: In FY 2011: HTS R7 SWUP flight testing support and additional software releases for flight testing continues. Studies continue on risk reduction efforts for the next P3I phase. HTS R7 SWUP flight testing continues to include completing all data baseline activities and initial formal developmental fight testing and all associated data analysis and release of upgraded software for subsequent flight testing. Studies include candidate selection process activities and risk reduction efforts for follow-on upgrades. Mission support, i.e., program management, for administrative and technical support activities continue. The major thrusts of this year would be preparation and support of continued flight testing activities and risk reduction candidate selection activities for the follow-on P3I effort. This P3I R7 study effort for the next phase is a continuation of the HTS P3I effort.						
FY 2011 OCO Plans: In FY 2011 OCO: Not Applicable.						
MAJOR THRUST: Flight Test		0.000	0.977	1.838	0.000	1.838

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: In FY 2009: Not Applicable						
FY 2010 Plans: In FY 2010: Begin government support (responsible test organization at Edwards AFB, CA) of test planning activities and provide scheduling support for needed resources and required configurations to ensure a successful start of HTS R7 SWUP flight test program. Ground testing is anticipated to include anechoic chamber testing, as needed. The test organization will conduct the flight testing missions to include F-16 test aircraft operations, threat ranges and associated support, air re-fueling, and range control support. Post-mission flight test support will also be accomplished.						
FY 2011 Base Plans: In FY 2011: Government flight test operations continue to include test planning activities, scheduling support for all needed resources and required configurations for each flight test mission, double the number of missions from FY 2010. Ground testing continues via anechoic chamber testing, as needed. The test organization will continue to conduct each mission to include F-16 test aircraft operations, threat ranges and associated support, air re-fueling, and range control support. Post-mission flight test support for each mission also continues.						
FY 2011 OCO Plans: In FY 2011 OCO: Not Applicable.						
MAJOR THRUST: Joint Mission Planning System (JMPS) (Formerly AFMSS)		0.000	0.818	0.835	0.000	0.835
FY 2009 Accomplishments: In FY 2009: Not Applicable						

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Air Force							<b>DATE:</b> February 2010				
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<b>B. Accomplishments/Planned Program (\$ in Millions)</b>											
						<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>	
<p><i>FY 2010 Plans:</i> In FY 2010: Begin HTS mission planning module upgrade effort to release upgraded mission planning software to support HTS R7 SWUP flight testing. This effort will build the first engineering release of HTS R7 SWUP mission planning software to be released to support formal HTS R7 SWUP developmental flight testing.</p> <p><i>FY 2011 Base Plans:</i> In FY 2011: Continues mission planning software upgrade effort to include correcting deficiencies found, additional engineering software releases and preparations for formal fielding with HTS R7 SWUP in FY 2012.</p> <p><i>FY 2011 OCO Plans:</i> In FY 2011 OCO: Not Applicable.</p>											
Accomplishments/Planned Programs Subtotals						5.413	9.748	12.937	0.000	12.937	
<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• PE 0207136F: <i>Manned Destructive Suppression, HTS Aircraft Procurement (BP19) APAF</i>	10.086	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>D. Acquisition Strategy</b>											
The HTS R7 improvement strategy includes accomplishment of risk reduction studies and selection of appropriate contracting strategies for P3I and upgrade of HTS inventory.											

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<b>E. Performance Metrics</b> Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development					R-1 ITEM NOMENCLATURE PE 0207136F: Manned Destructive Suppression				PROJECT 674595: F-16 HARM Targeting System				
Product Development (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Raytheon Systems Co./ Other Support	SS/Various	TBD TBD	130.419	7.953		10.264		0.000		10.264	0.000	148.636	0.000
JMPS (Formerly AFMSS)	SS/Various	TBD TBD	2.674	0.818		0.835		0.000		0.835	0.000	4.327	0.000
Lockheed/Ft Worth	SS/FFP	TBD TBD	2.400	0.000		0.000		0.000		0.000	0.000	2.400	0.000
Subtotal			135.493	8.771		11.099		0.000		11.099	0.000	155.363	0.000
Remarks HTS R7 SWUP/P3I begins in FY09.													
Support (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Mission Support	Various/ Various	TBD TBD	9.837	0.000		0.000		0.000		0.000	0.000	9.837	0.000
Subtotal			9.837	0.000		0.000		0.000		0.000	0.000	9.837	0.000
Remarks													

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<p><b>Test and Evaluation (\$ in Millions)</b></p> <table border="1" style="width:100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th rowspan="2">Cost Category Item</th> <th rowspan="2">Contract Method &amp; Type</th> <th rowspan="2">Performing Activity &amp; Location</th> <th rowspan="2">Total Prior Years Cost</th> <th colspan="2">FY 2010</th> <th colspan="2">FY 2011 Base</th> <th colspan="2">FY 2011 OCO</th> <th>FY 2011 Total</th> <th rowspan="2">Cost To Complete</th> <th rowspan="2">Total Cost</th> <th rowspan="2">Target Value of Contract</th> </tr> <tr> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> </tr> </thead> <tbody> <tr> <td>Eglin</td> <td>PO</td> <td>TBD TBD</td> <td align="right">2.175</td> <td align="right">0.000</td> <td></td> <td align="right">0.000</td> <td></td> <td align="right">0.000</td> <td></td> <td align="right">0.000</td> <td align="right">0.000</td> <td align="right">2.175</td> <td align="right">0.000</td> </tr> <tr> <td>Edwards</td> <td>PO</td> <td>TBD TBD</td> <td align="right">14.269</td> <td align="right">0.977</td> <td></td> <td align="right">1.838</td> <td></td> <td align="right">0.000</td> <td></td> <td align="right">1.838</td> <td align="right">0.000</td> <td align="right">17.084</td> <td align="right">0.000</td> </tr> <tr> <td>Light Defender</td> <td>TBD/TBD</td> <td>TBD TBD</td> <td align="right">0.922</td> <td align="right">0.000</td> <td></td> <td align="right">0.000</td> <td></td> <td align="right">0.000</td> <td></td> <td align="right">0.000</td> <td align="right">0.000</td> <td align="right">0.922</td> <td align="right">0.000</td> </tr> <tr> <td align="right" colspan="3"><b>Subtotal</b></td><td align="right">17.366</td><td align="right">0.977</td><td></td><td align="right">1.838</td><td></td><td align="right">0.000</td><td></td><td align="right">1.838</td><td align="right">0.000</td><td align="right">20.181</td><td align="right">0.000</td> </tr> </tbody> </table>														Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Eglin	PO	TBD TBD	2.175	0.000		0.000		0.000		0.000	0.000	2.175	0.000	Edwards	PO	TBD TBD	14.269	0.977		1.838		0.000		1.838	0.000	17.084	0.000	Light Defender	TBD/TBD	TBD TBD	0.922	0.000		0.000		0.000		0.000	0.000	0.922	0.000	<b>Subtotal</b>			17.366	0.977		1.838		0.000		1.838	0.000	20.181	0.000
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<p><b>Remarks</b> Light Defender was a foreign system that was evaluated for possible SEAD role in 1995-96; but was not procured.</p>																																																																																										
<table border="1" style="width:100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th></th> <th>Total Prior Years Cost</th> <th>FY 2010</th> <th>FY 2011 Base</th> <th>FY 2011 OCO</th> <th>FY 2011 Total</th> <th>Cost To Complete</th> <th>Total Cost</th> <th>Target Value of Contract</th> </tr> </thead> <tbody> <tr> <td align="right"><b>Project Cost Totals</b></td><td align="right">162.696</td><td align="right">9.748</td><td align="right">12.937</td><td align="right">0.000</td><td align="right">12.937</td><td align="right">0.000</td><td align="right">185.381</td><td align="right">0.000</td> </tr> </tbody> </table>															Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract	<b>Project Cost Totals</b>	162.696	9.748	12.937	0.000	12.937	0.000	185.381	0.000																																																											
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<p><b>Remarks</b> Total Prior Years Cost may include only FY 2009 data.</p>																																																																																										

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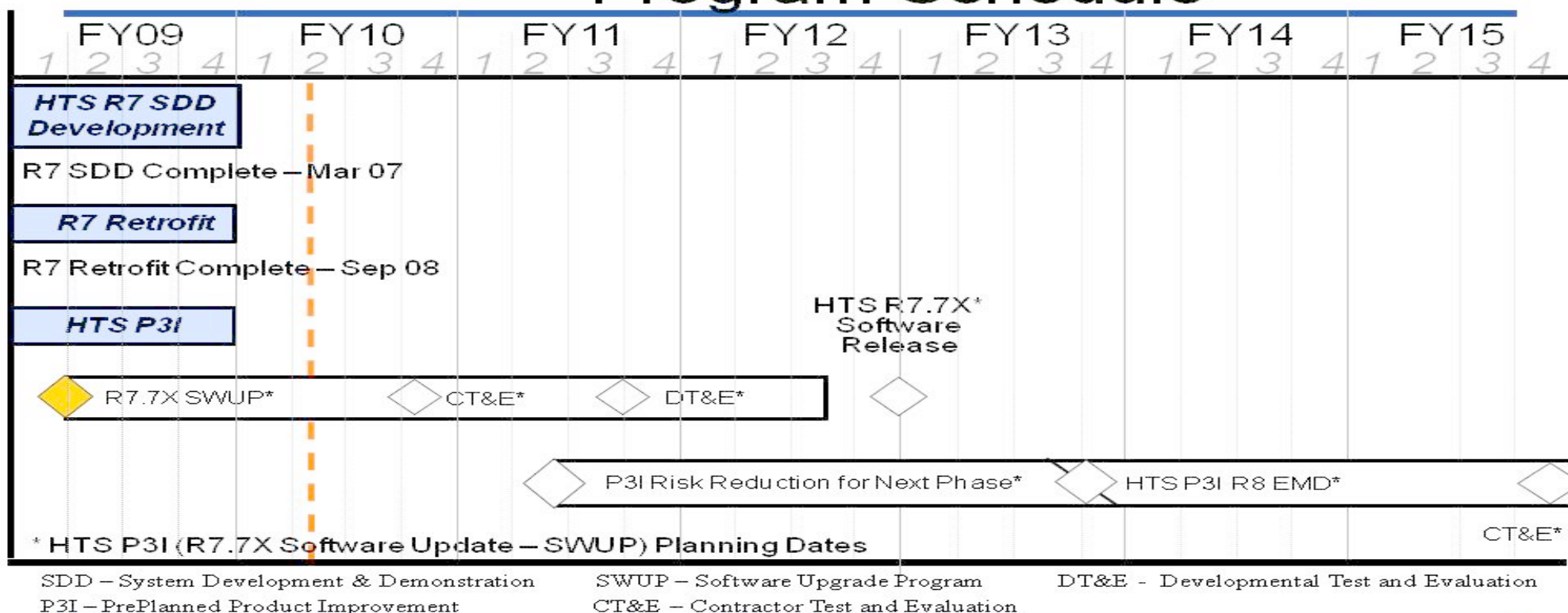
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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Air Force		DATE: February 2010
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## Manned Destructive Suppression Program Schedule



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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2011 Air Force			<b>DATE:</b> February 2010
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**Schedule Details**

<b>Event</b>	<b>Start</b>		<b>End</b>	
	<b>Quarter</b>	<b>Year</b>	<b>Quarter</b>	<b>Year</b>
R7 Follow-on Study (SWUP Risk Reduction)	1	2009	2	2009
R7 SWUP Contract Award	2	2009	2	2009
R7 SWUP Flight Test (DT&E)	4	2010	4	2011
HTS P3I Risk Reduction for Next Phase Contract	3	2010	4	2011

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